

What is claimed is :

1. A film-like materials of resin manufacturing method for producing a film-like material made of a resin by rolling a thermoplastic resin material containing a thermoplastic resin using a molding apparatus comprising first rotation molding members composed of a pair of rollers, characterized in that the rolling is carried out under the condition 1 that the line contact pressure  $P$  (kN/m) applied to the thermoplastic resin, the peripheral velocity  $R$  (m/sec) of the rollers of the first rotation molding members, and the thickness  $H$  (m) of the film-like material made of the resin after rolling satisfy the following inequalities:

$$\text{(formula 1)} \quad 3 \times 9.8 \leq P$$

$$\text{(formula 2)} \quad 3 \times 9.8 \times 10^{-6} \leq P/(R/H^2) \leq 2 \times 9.8 \times 10^{-5}.$$

2. A film-like material of resin manufacturing method for producing a film-like material made of a resin by rolling a thermoplastic resin material containing a thermoplastic resin using a molding apparatus comprising first rotation molding members composed of a pair of rollers, characterized in that the rolling and molding is carried out while setting the surface temperature  $T$  of said first rotation molding members so as to satisfy the following conditions defined as (formula 3) or (formula 4):

in the case the thermoplastic resin is crystalline,

$$\text{(formula 3)} \quad T > T_m \text{ and}$$

in the case the thermoplastic resin is not crystalline,

$$\text{(formula 4)} \quad T > T_g, \text{ wherein the reference character } T_m \text{ is the melting point of the crystalline thermoplastic resin and the reference character } T_g$$

is the glass transition temperature of the not crystalline thermoplastic resin.

3. The film-like material of resin manufacturing method for producing a film-like material made of a resin as claimed in claim 1, characterized in that the rolling and molding is carried out while setting the surface temperature  $T$  of said first rotation molding members to be employed for the rolling and molding so as to satisfy the following conditions defined as (formula 3) or (formula 4):

in the case the thermoplastic resin is crystalline,

(formula 3)  $T > T_m$  and

in the case the thermoplastic resin is not crystalline,

(formula 4)  $T > T_g$ , wherein the reference character  $T_m$  is the melting point of the crystalline thermoplastic resin and the reference character  $T_g$  is the glass transition temperature of the not crystalline thermoplastic resin.

4. A film-like materials of resin manufacturing method for producing a film-like material made of a resin by rolling a thermoplastic resin material containing a thermoplastic resin using a molding apparatus comprising first rotation molding members composed of a pair of rollers, characterized in that the rolling is carried out while setting the surface temperature  $T$  of said first rotation molding members so as to satisfy the following condition 1 and condition 2:

<condition 1>

at the temperature  $T$ , the melt tensile strength  $MT$  (g) and the drawing degree  $L$  of the thermoplastic resin fulfill the following ranges

(formula)  $MT > 10 \text{ g}$  and  $L > 100\%$ .

<condition 2>

in the case the thermoplastic resin is crystalline,

(formula 3)  $T > T_m$  and

in the case the thermoplastic resin is not crystalline,

(formula 4)  $T > T_g$ , wherein the reference character  $T_m$  is the melting point of the crystalline thermoplastic resin and the reference character  $T_g$  is the glass transition temperature of the not-crystalline thermoplastic resin.

5. The film-like materials of resin manufacturing method as claimed in any one of claims 1 to 4, wherein the peripheral velocities of the pair of the rollers composing said first rotation molding members are approximately equal speed.

6. The film-like materials of resin manufacturing method as claimed in claim 4, wherein the film-like materials of resin produced by rolling and molding by said first rotation molding members is successively brought into contact with second rotation molding members composed of rollers rotating at a peripheral velocity at least 1.08 times as fast as the peripheral velocities of the first rotation molding members.

7. The film-like materials of resin manufacturing method as claimed in claim 4, wherein said thermoplastic resin contains 10 wt % or more of a thermoplastic resin having a molecular chain length of 2850 nm.

8. The film-like materials of resin manufacturing method as claimed in claim 4, wherein said thermoplastic resin contains 10 to 300 parts by weight of a filler to 100 parts by weight of the thermoplastic resin.

9. A crystalline thermoplastic resin film characterized in that the orientation coefficient of the c-axis of the crystal in said film to the MD direction of said film is 0.8 or higher.
10. The crystalline thermoplastic resin film as claimed in claim 9, characterized in that said crystalline thermoplastic resin is a polyolefin-based resin.
11. The crystalline thermoplastic resin film as claimed in claim 10, characterized in that said polyolefin-based resin contains 10 wt % or more of polyolefin with a molecular chain length of 2850 nm or longer.
12. The crystalline thermoplastic resin film as claimed in claim 11, characterized in that the film contains 10 to 300 parts by weight of a filler to 100 parts by weight of the crystalline thermoplastic resin.
13. A crystalline thermoplastic resin film manufacturing method comprising a rolling step for rolling a crystalline thermoplastic resin using at least one pair of rolls to obtain a film having 0.8 or higher orientation coefficient of the c-axis of the crystal in said film to the MD direction of said film.
14. The crystalline thermoplastic resin film manufacturing method as claimed in claim 13, characterized in that the surface temperature  $T$  of the rolls in said rolling step and the melting point  $T_m$  of the crystalline thermoplastic resin satisfy the following (formula 6):
- (formula 6):  $T > T_m$ .
15. The crystalline thermoplastic resin film manufacturing method as claimed in claim 14, characterized in that the surface temperature  $T$  of the rolls in said rolling step is the temperature at which the melt tensile

strength MT and the drawing degree L of said crystalline thermoplastic resin fulfill the following ranges:

(formula)  $MT > 98 \text{ mN (10 gf)}$  and  $L > 100\%$ .

16. The crystalline thermoplastic resin film manufacturing method as claimed in claim 15, characterized in that said crystalline thermoplastic resin is a polyolefin-based resin.

17. The crystalline thermoplastic resin film manufacturing method as claimed in claim 16, characterized in that said crystalline thermoplastic resin contains 10 to 300 parts by weight of a filler to 100 parts by weight of said resin.